



**COURSE TITLE: CIS202– Introduction to Programming**

**SEMESTER TWO: FINAL EXAMINATION 1 2022 April**

**LECTURER: MR J.CHINZVENDE**

**TIME: 3 HOURS**

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### ***INSTRUCTIONS***

Answer questions instructed in each section

Start **each** question on a new page.

The marks allocated to **each** question are shown at the end of the section.

**Answer all questions in Section A and Chose any two in section B**

Credit will be awarded for logical, systematic and neat presentations.

## **Section A (Answer all questions 40 marks)**

### **Question One**

**Define the following terms as they are used in Programming**

- a. Syntax
- b. Pseudo code
- c. Variable
- d. Operator
- e. Algorithm

[10]

### **Question Two**

**What is the difference between the following?**

- a. Logical error and syntax error
- b. Syntax error and runtime error
- c. High level language and low level language
- d. Variable and constant declaration
- e. Interpreters and compilers.

[10]

### **Question Three**

**Declare the following variables in vb.net ?**


- a. Temperature
- b. Student mark
- c. Weight
- d. Status on or off
- e. Cost of Books

[10]

### **Question four**

A flowchart consists of special geometric symbols connected by arrows. Fill and complete the table below

[10]

Symbol	Name	Meaning
		Used to connect symbols and indicate the flow of logic.
		

	Decision	
		Used for processing
		Used to join different flowlines

#### Question five

Describe the steps' in designing a Visual Basic program

[10]

### SECTION B (Answer any two questions 50 marks)

#### Question six

Tinotenda wants to convert given temperature in degree Celsius to Fahrenheit and vice versa.

- Draw a Flow Chart to show the process
- Design an algorithm to solve this problem
- Design and draw the user interface to perform the process.
- Set the properties and write the code for the process

[25]

#### Question Seven

Murambi Clinic charges \$10 per hours for casual workers. Extra hours above 30 will be charged at \$15 per hour You are required to design a Program that inputs hours worked and output the Gross salary

- Design a flow chart to show the process
- Design the user interface and write the code
- Validate the code to ensure that correct data is entered.
- Use error handling technique to trap errors in the code

[25]

#### Question Eight

- A local clinic has requested you to develop a software application to calculate the **body mass index** of its patients.
  - Using vb.net windows application design the user interface of the BMI calculator

- ii. Set the names and properties of the objects used
- iii. Write the code under the command button for the BMI calculation You should validate ti ensure that the correct data type is entered [25]